Using Growth Percentiles to Measure Student Level Growth

What are Growth Percentiles?

"How much has a student learned at their school in the past year, compared to students that started with the same test scores in 2005 to the present?"

Developed by Damian Betebenner, National Center for the Improvement of Educational Assessment, and currently used in Colorado and Massachusetts as the state-wide measure of quality. It is often referred to as the "Colorado Growth Model."

Why is this data unique?

•Arizona Growth Model, measures student progress from one year to the next in the context of a student's "academic peers."

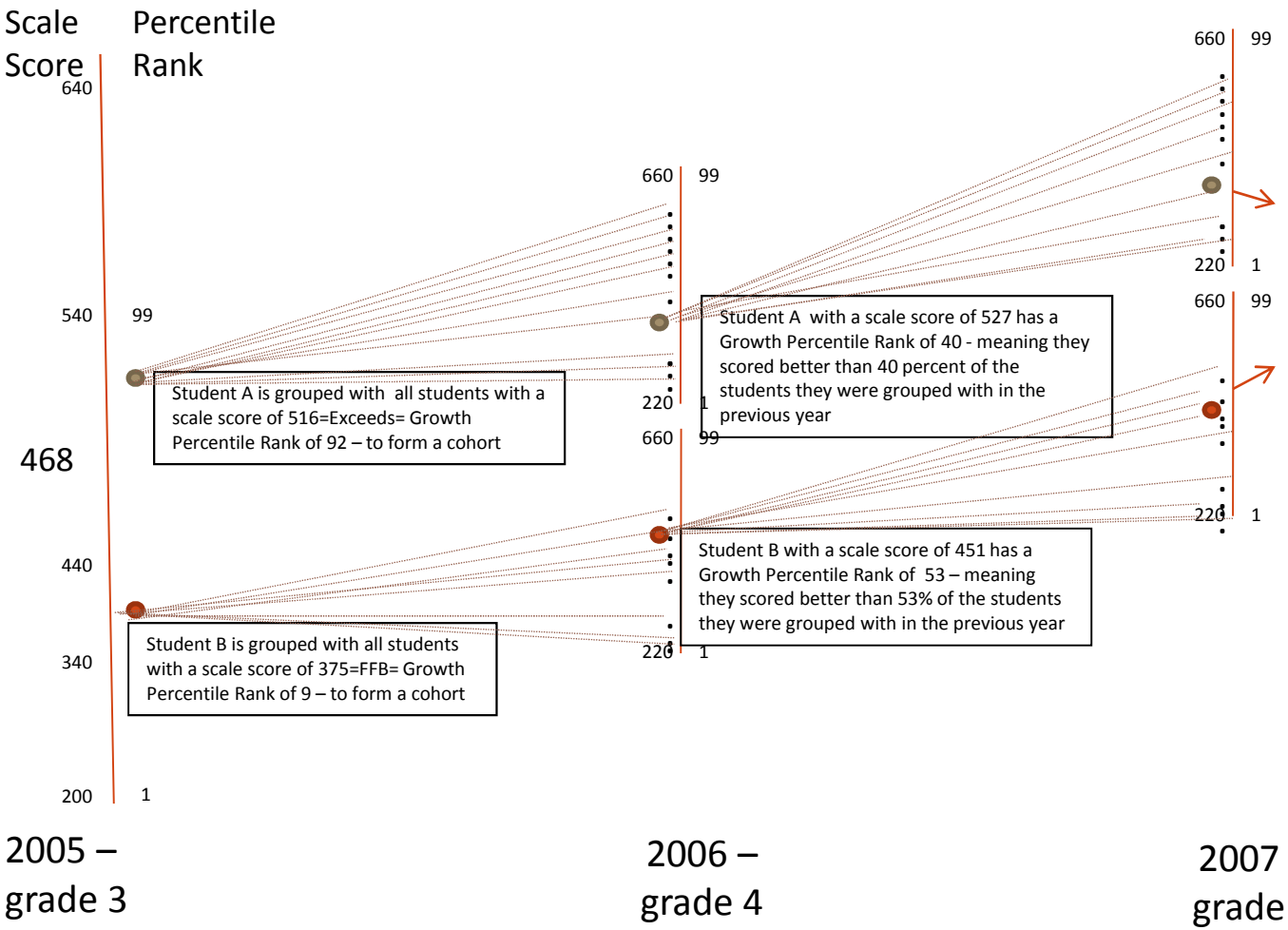
•Compares each student's performance to students in the same grade throughout Arizona who had similar AIMS scores in past years and calculates a growth percentile

Why is this data unique?

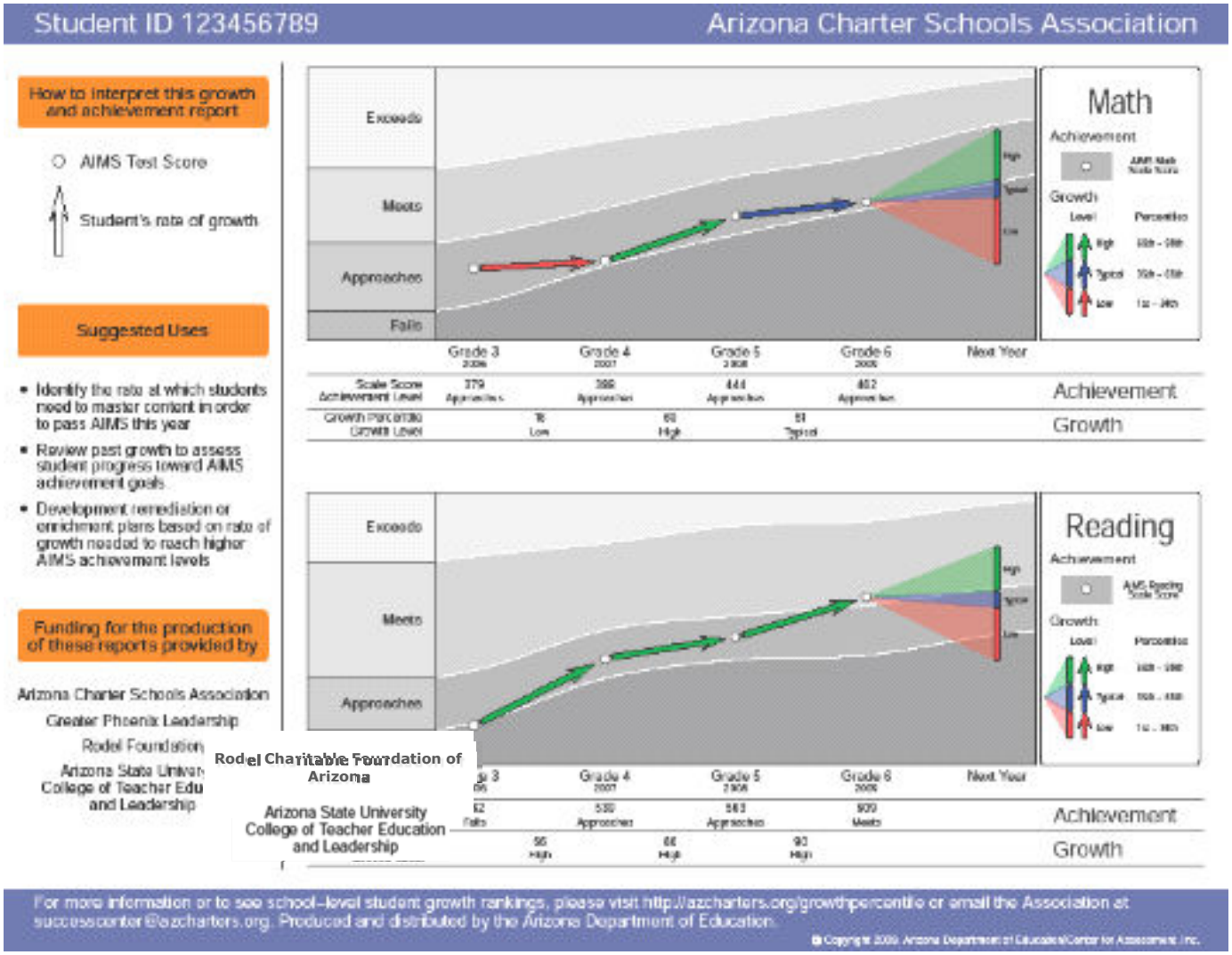
•Students are compared to themselves from year to year so the results are not skewed by income levels, parental involvement, race or gender

•Uses multiple years of a student's test scores to show how each student is progressing from year to year and to estimate the student's expected future academic performance

•This data will be provided annually at the beginning of the school year for teachers to develop a plan to meet individual student needs.



Student A drops to a Growth Percentile Rank of 30 in 2007, meaning that even though they score high they are not growing as fast as their academic peers across the state. Student B increases to a Growth Percentile Rank of 60, meaning that even though they haven't passed AIMS yet, they are growing faster than their academic peers across the state



A 7th grade teacher can see that the student will fall to FFB with only typical growth in Math. However, past growth rates in green show that the student can be on a higher trajectory to mastering the 7th grade state standards. For Reading, the 7th grade teacher can see the student tends to be at the top of the scale compared to peers, even though AIMS scores reached Meets level only last year, indicating a capacity to absorb content at a fast rate. The student must stay at the current high rate to keep the Meets label, as cut score levels go up. The 6th grade teacher can see that the student had average progress in their class in Math but high growth in Reading and may be able to identify personal professional development goals in Math and differentiated instruction. A fifth grade teacher seeing the 3rd to 4th grade red arrow indicating low growth would have good evidence to place this student in an intervention program.

How can principals use the growth model?

- Can see trends by teachers to differentiate professional development.

- Begin the dialogue with teachers around data by using a user-friendly display rather than messy tables and excel files.

How can teachers use the growth model?

- Can reflect on the following questions quickly and efficiently
  - Did a student make a year's worth of progress in a year?
  - Is the student growing appropriately to meeting state standards?
  - Is the student growing as much in reading as math?
  - Did the student grow as much this year as last year?

- Looking at year-to-year results in math and reading, teachers can spot trends in a student's learning so they can encourage more, faster growth or act quickly to stop a downward drift.

- It also allows teachers to identify students that may be scoring low but have grown dramatically in the past – requiring different strategies than a student with low, flat scores.